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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,272	11/15/2001	Jeffrey B. Hoke	4569A(DIV)	3733

7590

10/08/2003

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EXAMINER

TRAN, HIEN THI

ART UNIT

PAPER NUMBER

1764

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/002,272

Applicant(s)

HOKE ET AL.

Examiner

Hien Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 37-58 is/are pending in the application.
- 4a) Of the above claim(s) 37-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 48-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 37-58 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 48-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 48, lines 5-7 it is unclear as to what structural limitation applicants are attempting to recite, also "contaminants" has no clear antecedent basis and it is unclear how the contaminants are related to the pollutants set forth in lines 2 and 5.

In claim 54, the language of the claim is directed to method limitation which renders the claim vague and indefinite as it is unclear as to what structural limitation applicants are attempting to recite. Note that the atmospheric pollutants are not parts of the device.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 48, 53-54, 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patil et al (5,125,231) in view of Abe et al (5,538,697).

Patil et al discloses a motor vehicle component, e.g. catalytic converter, coated with a catalyst material of noble metal, etc.; an adsorbent of zeolite on the surface of the catalyst material.

The apparatus of Patil et al is substantially the same as that of the instant claims but fails to disclose whether the adsorbent material may be activated carbon.

However, Abe et al discloses that the adsorbent material may be zeolite, or activated carbon.

It would have been obvious to one having ordinary skill in the art to select an appropriate material, such as carbon as taught by Abe et al as an adsorbent material, in the apparatus of Patil et al on the basis of its suitability for the intended use as a matter of obvious design choice for the known and expected results of obtaining the same results in the absence of unexpected results and since the use of both is known in the art and no cause for patentability here.

6. Claim 49-52, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patil et al (5,125,231) in view of Abe et al (5,538,697) as applied to claims 48, 53-54, 56-58 above and further in view of WO 98/02235 and Hoke et al (6,190,627).

The modified apparatus of Patil et al is substantially the same as that of the instant claim, but fails to disclose whether a protective layer may be provided.

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However, WO 98/02235 discloses that a protective layer of polymers is coated on the surface of the catalyst material.

Hoke et al discloses that the protective material is selected from the group of fluoropolymers or silicone polymers.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a protective layer as taught by WO 98/02235 and Hoke et al in the modified apparatus of Patil et al so as to prevent liquid from reaching the catalyst layer.

Select an appropriate material for the protective layer is within the purview of one having ordinary skill in the art during routine experimentation and optimization of the system as evidenced by WO 98/02235 and Hoke et al and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

7. Claims 48-54, 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/02235 in view of Patil et al (5,125,231) and Abe et al (5,538,697).

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WO 98/02235 discloses a motor vehicle component, e.g. radiator, coated with a catalyst material of base metal, precious metal, or manganese oxide, etc.; a protective layer of polymers.

The apparatus of WO 98/02235 is substantially the same as that of the instant claims but fails to disclose whether an overcoat of material selected from the group of zeolite, activated carbon, etc., may be provided on the surface of the catalyst material.

However, Patil et al discloses the conventionality of providing an adsorbent of zeolite on the surface of the catalyst material.

Abe et al discloses that the adsorbent material may be zeolite, or activated carbon.

It would have been obvious to one having ordinary skill in the art to provide an overcoat of adsorbent material on the surface of the catalyst material as taught by Patil et al in the apparatus of WO 98/02235 so as to enhance the purification of the system during start up of the engine.

It would have been obvious to one having ordinary skill in the art to select an appropriate material, such as activated carbon as taught by Abe et al as an adsorbent overcoat material, in the modified apparatus of WO 98/02235 on the basis of its suitability for the intended use as a matter of obvious design choice so as to improve the purification of the system thereof, as use of such is known in the art and no cause for patentability here.

8. Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/02235 in view of Patil et al (5,125,231) and Abe et al (5,538,697) as applied to claims 48-54, 56-58 above and further in view of Hoke et al (6,190,627).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to select an appropriate material for the protective material, since it has been

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held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

In any event, Hoke et al discloses that the protective material is selected from the group of fluoropolymers or silicone polymers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to alternately select an appropriate material for the protective material, such as the ones taught by Hoke et al, for the known and expected results of obtaining the same results by different means in the absence of unexpected results.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 48-58 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-19 of U.S. Patent No. 6,190,627 in view of Abe et al (5,538,697).

Claims 9-19 of U.S. Patent No. 6,190,627 disclose a motor vehicle component, e.g. radiator, coated with a catalyst material of base metal, precious metal, or manganese oxide, etc.;

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a hydrophobic protective layer of fluoropolymers or silicone polymers; and an overcoat of material selected from the group of zeolite, etc., but are silent as to whether the overcoat material may be carbon, e.g. activated carbon.

Abe et al discloses that the adsorbent material may be zeolite, or activated carbon.

It would have been obvious to one having ordinary skill in the art to select an appropriate material, such as carbon as taught by Abe et al as an overcoat material, in the apparatus of claims 9-19 of U.S. Patent No. 6,190 on the basis of its suitability for the intended use as a matter of obvious design choice so as to improve the purification of the system thereof, as use of such is known in the art and no cause for patentability here.

Response to Arguments

11. Applicant's arguments filed 7/16/03 have been fully considered but they are not persuasive.

a) Applicants argue that the references of Patil et al and Abe et al fail to teach a device that utilizes the outer surface of a motor vehicle component as required by the instant claims since the catalytic converters of Abe et al and Patil et al are exposed to the exhaust gas generated by an internal combustion engine, not the atmosphere as contemplated in the instant invention. Such contention is not persuasive as the atmosphere also enters the engine, is converted to exhaust and then passes through the catalytic converter. Note that the outer surface of each cell in the catalyst converter of Patil et al and Abe et al are exposed to the gas passing therethrough and therefore meets the instant claims.

b) Applicants argue that the outer surface of the motor vehicle component in the instant invention refers to a component that is capable of catalytically converting pollutants to less

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harmful material without adversely affecting the substrate and its function while the catalytic converter of Patil et al and Abe et al has no other function in the vehicle other than the catalytic conversion of harmful exhaust components. Such contention is not persuasive as the catalytic converter of Patil et al and Abe et al is capable of catalytically converting pollutants to less harmful material without adversely affecting the substrate and its function. Its function can be supporting catalyst particles, etc. The instant claim does not recite anything to further distinguish the outer surface of the motor vehicle component of the instant invention from the catalytic converter of Patil et al and Abe et al and therefore the catalytic converter of Patil et al and Abe et al meets the instant claims.

c) Applicants argue that the WO reference and Hoke et al is used for treating atmospheric air while Patil and Abe references are used for treating engine exhaust. Such contention is not persuasive for the same reasons set forth in section a) above. Furthermore, it should be noted that the problem to be solved here is to convert harmful pollutants to harmless gas thereof.

d) In response to applicant's argument that the use of zeolite in Patil et al is not for protecting the catalyst as set forth in instant invention, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

WO 96/22146, WO 96/22150 and WO 97/11769 are cited for showing state of the art.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is 308-4253. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

HT
October 6, 2003

Hien Tran
Hien Tran
Primary Examiner
Art Unit 1764